EAST LANSING, MICH.—Dedication of the O.J. Noer Memorial Turf Collection at Michigan State University took place here on January 16 as part of MSU's Turfgrass Conference. The dedication marked the culmination of efforts by many turf industry leaders to bring together valuable reference material that had been scattered all over the country and to create the best library collection of its kind. For present and future students of agronomy, it is a long-awaited research source, as well as a tribute to their chosen field.

Following the ceremony, Charles G. Wilson, research director of the Noer Foundation, presented Dr. Richard E. Chapin, director of libraries at MSU, its Distinguished Service Award at the conference luncheon.

Chapin had personally contributed much of his personal time to putting together the collection, the binding and cataloguing of which has cost MSU $13,000, thus far.

Although the Noer collection, according to Dr. James B. Beard, associate professor at MSU's Department of Crop and Soil Science, exceeds all other library collections in the world by at least 90 per cent, there are still items needed to fill in the gaps. Beard has compiled a "Bibliography of Turfgrass Publications," and he suggests prospective donors read it first. This will avoid unnecessary duplication and will allow other libraries to be established once the Michigan State library is complete. Donors will be recognized by an enclosed "Presented by" nameplate marker pasted on the inside cover of the publication.

The Beard pamphlet, describing the collection, will be mailed to all turfgrass research workers, golf course superintendents, turfgrass publications and members of the Noer Foundation.

The breakdown of the collection is as follows: turfgrass conference proceedings, scientific and technical periodicals, scientific journals that publish research relating to turfgrass, technical journals that support turfgrass research and turfgrass and lawn books.

Valuable books have been placed in the rare book section of the library where use is limited to a two-hour period. These books include Barran's "Lawns and How to Make Them" (1906); Hitchinson's "Golf Greens and Greenkeeping" (1906); O.J. Noer's "ABC of Turf Culture" (1928), and Shaw's "Grasses and How to Grow Them" (1903). In addition, there are personally autographed editions of Piper & Oakley's "Turf for Golf Courses" (1917 and 1923); H. Burton Musser's "Turf Management" (1950 and 1962); L.S. Dickinson's "The Lawn," and R.B. Dawson's "Practical Lawn Craft.

Also included in the collection are complete back issues of GOLFDOM dating back to 1927, United States Golf Assn. Green Section Bulletins and their other publications and all publications issued by the Golf Course Superintendents Assn. of America.

The Noer collection also houses architectural books, such as Colt & Alison's "Essays on Golf Architecture" (1920); Hunter's "The Links" (1926); Simpson's "Golf Course Design" (1933); Sutton's "The Book of the Links" (1912), and Thomas' "Golf Architecture in America: Its Stregety and Construction" (1927).

Of special interest to turfgrass scholars, students, teachers and others interested is the interlibrary loan system. Local libraries can request information through the MSU library or it can be requested directly by anyone interested. The key to this system is the Beard bibliography, which will be on file in major libraries throughout the country. Information on author, title, date and pages will be easily accessible to the reader. Photocopying is available at the usual fees and there is no charge for loan of original volumes.

On the next page is a selected bibliography of the O.J. Noer Memorial Turfgrass Collection.

Noted agronomist and GOLFDOM columnist James Beard (left) with Charles G. Wilson of the Noer Foundation at the recent dedication.
TURFGRASS CONFERENCE PROCEEDINGS


Southern California Turfgrass Institute, 1959-60, 1963, 1970
Southwest Turf Conference, 1948
Tennessee Turfgrass Conference (1957), 1967-72
Texas Turfgrass Conference Proceedings (1951), 1951, 1954, 1957-68
Turf and Landscape Clinic Proceedings (Tennessee), 1966
Turf and Landscape Horticulture Institute, 1972
Turf Clippings (See Massachusetts Turf Conference).
Turf, Nursery and Landscape Tree Conference, 1964-66
Turfgrass Sprinkler Irrigation Conference (1963), 1960-67
Utah Turfgrass Conference (1954), 1954
Virginia Turfgrass Conference, 1963
West Virginia Turf Conference, 1967-68
Western (Canada) Turf Conference, 1953
Wisconsin Turfgrass Conference (1962), 1962-66

SCIENTIFIC AND TECHNICAL PERIODICALS

The following are the technical journals and newsletters of primary interest for turfgrass research. The dates indicate holdings in the Michigan library.
The Bull Sheet (Midwest Assn. of Golf Course Superintendents), 1965
California Turfgrass Culture, 1951
Divot News, 1970
Florida Turf, 1961-62
Golf Course Reporter (See Golf Superintendent).
Golf Superintendent, 1931 (Title varies: 1933-31 as Greenkeeper's Reporter, 1951-65 as Golf Course Reporter).
Green Section Record (See USGA).
Greenkeeper's Reporter (See Golf Superintendent).
Kansai Golf Union (Japan), Green Section, Turf Research Bulletin, 1963
Lawn Care, 1928
Mid-Atlantic Newsletter (Mid-Atlantic Assn. of Golf Course Superintendents), 1959-72.
Midwest Turf, 1946-52.
Milwaukee Sewerage Commission Turf Service Bureau, Bulletin, Number 1, 3, 5.
National Greenkeeper and Turf Culture, 1927-33.
New Zealand Institute for Turf Culture, Newsletter, 1960
Northwest Turf Topics, 1965-68
Ontario Golf Superintendents Assn., 1965
Ohio State University Turfgrass Research, 1965.
Ohio State University Turfgrass Research, 1965.
Pacific Northwest Turf Journal (See Northwest Turf Conference).
Rocky Mountain Regional Turfgrass Congress (1954), 1954-56, 1959-68.
School of Soils Fertilization and Turf Maintenance (See Royal Canadian Golf Assn.).
Scott's Turfgrass Research Conference (1968), 1968-72
Southern California Turfgrass Conference (1955), 1955-70 (all published).
Southwest Turf Conference, 1948
Texas Turfgrass Conference Proceedings (1951), 1951, 1954, 1957-68
Turf and Landscape Clinic Proceedings, (Tennessee), 1966.
Turf and Landscape Horticulture Institute, 1972.
Turf Clippings (See Massachusetts Turf Conference), Turf, Nursery and Landscape Tree Conference, 1964-66
Turfgrass Sprinkler Irrigation Conference (1963), 1960-67
Utah Turfgrass Conference (1954), 1954
West Virginia Turf Conference, 1967-68.
Western (Canada) Turf Conference, 1953.

1963: Vendure (The Newsletter of the Chicagoland Golf Course Superintendents Assn.), 1972
Woods, Trees and Turf, 1962
Weibull's Grästr. 1962
(The scientific journals listed below publish primary research materials relating to turfgrass. The dates shown are for the first issue and the 'T' indicates that all issues are in the MUI Library.
Advances in Agronomy, 1959
Agronomy Abstracts, 1955
Agronomy Journal, 1967
Botanical Gazette, 1905
Crop Science, 1961
Phytopathology, 1911
Plant Disease Reporter, 1917
Plant Physiology, 1920
Soil Science, 1916
Soil Science Society of America. Proceedings, 1936
Weeds, 1951
(The following technical journals add support to the above titles for turfgrass research. Dates indicate holdings in the MUI Library.)
Crops and Soils, 1948
Garden and Landscape, 1958
Grounds Maintenance, 1961
The Groundsman, 1961
Landscape Architecture, 1910
Landscape Design and Construction, 1957
Landscape Industry, 1957
Landscape, 1963
Modern Cemetery, 1901
Park Maintenance, 1948
Parks and Recreation, 1922
Parks, Golf Courses and Sports Grounds, 1954

TURFGRASS AND LAWN BOOKS

(Listed below are selected monographs dealing with lawn, turfgrass and turfgrass research. All items are in the O.J. Nor Collection of MUI Library. In cases where the author was unknown, the book is listed by title. Many other titles in plant sciences include chapters, sections or additional information relating to turfgrass. Access to these monographs will be available in Professor Beard's forthcoming turfgrass bibliography.)
The ABC's of Lawn Sprinkler Systems, 1972
Barron, L. Lawn Making, 1922
Barron, L. Laws of How to Make Them, 1936
Beard, J.B. Turfgrass: Science and Culture, 1973
Bradshaw, J. Better Lawns, 1965
Burr, S. British Economic Grasses, 1933
Carleton, R.M. Your Lawn, 1939
Couch, H.B. Diseases of Turfgrasses, 1962
Dickinson, L.S. The Lawn, 1931.
Frear, G.A. Golf Course Common Sense, 1931
Hanson, A.A. and P.C. Jr. Turfgrass Science, 1969
How to Install and Care for Your Lawn, 1955.
Hunter, R. The Links, 1926.
Lewis, I.G. Turf, 1948.

continued on page 94
Westinghouse golf cars tackled the Baja.
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We drove our cars into the formidable Baja.* Dust, sand, rocks, and brush. Westinghouse electric golf cars took them all on and won. How tough is your course?
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*Test was sanctioned by the U.S. Auto Club with Westinghouse 3- and 4-wheel golf cars using six McCulloch 6-volt, 110-minute batteries.

For more information circle number 163 on card

You can be sure... if it's Westinghouse
The 44th Annual Golf Course Superintendents Assn. of America International Turfgrass Conference and Show, held in Boston January 7 to 12, produced another record showing.

More than 4,300 superintendents, exhibitors, green chairmen and wives braved the sub-zero Boston weather to attend the proceedings. The conference had an international flavor, with over 70 superintendents, club owners and manufacturers attending from all over the world. Represented were Japan, Germany, France, Guam, Canada, Switzerland and Spain. Although programmed for golf course superintendents, the conference this year was open to non-association members, students and persons in allied industries.

The educational seminars held throughout the week attracted more attention this year than last; some 50 speakers, including outstanding golf course superintendents, research scientists, agronomists and officials of other golf agencies highlighted a five-day educational program, which provided several special clinics.
freeze failed to daunt a record attendance
good selling climate punctuated another successful
by STEPHEN W. BYERS

Record seminar attendance proved Robert V. Mitchell, past
GCSAA president, correct in his prediction that this year’s conference would be the most significant yet in view of the many drastic changes taking place in golf course maintenance.

Attendants had an opportunity to compare notes on such topics as the Occupational Safety and Health Act (OSHA); pesticides; putting green construction; changes in automatic irrigation concepts, and superintendent responsibility before, during and after tournaments.

It appeared that the keynote speaker, Dr. Harvey L. Hahn, pastor emeritus, Otterbein United Methodist Church of Dayton, Ohio, aroused less enthusiasm than last year’s choice, consumer advocate, Ralph Nadar. Dr. Hahn’s desultory address was inspirational, but lacked relevance to the golf industry and general mood of the conference. His best effort at bending his speech to the purpose of the occasion was his statement, that “The golf courses of America have been valuable in maintaining the mental stability of the American public.”

The seminars on Changes in Automatic Irrigation Concepts engendered the most superintendent interest. James M. Latham Jr. discussed the many factors bearing on water requirements of turf, and Ed Shoemaker, national sales manager of Rain Bird Mfg. Corp., presented the hazards to successful installation of automatic irrigation systems and posed methods of avoiding them.

Dr. James Watson, vice president of The Toro Company, Minneapolis, presented a discussion of what constitutes soil pollution; the minimal contribution of golf courses to this pollution was heartening to attendants in light of the recent flurry of criticism in this connection. “In the main,” he said, “golf courses do more good, ecologically, than virtually any aspect of group activity or recreation one can call to mind.”

Another well received presentation was that of Dr. Leonard Goldwater on the affect of the Environmental Protection Act on golf

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course use of mercury compounds in fungicides and pesticides.

John Jackman, superintendent of Medinah (III.) CC, was encouraging in his speech on how to bear up under the restrictions of anti-burning laws.

Dr. Coleman Y. Ward strongly recommended that future research in putting green construction should be devoted to techniques in constructing greens with emphasis on developing less costly construction methods that will yield more predictable results.

The show portion, held in John B. Hynes Civic Auditorium, featured the latest in turf care machinery and services and produced a record 150 exhibitors in 42,000-square feet of space on two floors. A good selling market lasted throughout.

Attendants seemed to take more time viewing exhibits this year than at Cincinnati, and many exhibitors lacked sufficient booth personnel to handle the crowds of interested lookers.

Superintendents were particularly enthused about new aeration equipment on exhibit, which promised deeper penetration, and the new blanket type fungicide that spreads on in the form of thick foam, which manufacturers claim is superior to conventional spray application because it loses less potency to the atmosphere and covers more uniformly.

Several exhibits had daily give-away drawings, which attracted large crowds at four o'clock when the winners were announced.

A complete social program planned by the GCSEA of New England, for the more than 600 wives attending the show, partly assuaged the women's mute indignation at being separated from their husbands on the first day of the show. The GCSEA staff stood firm in its belief that a men-only policy for the first day of the show was more conducive to getting initial business out of the way.

A few members and exhibitors were justifiably unhappy that the show was spread over two floors. A certain feeling of disunity and isolation was evident, and many complained about the time required to...
These are only seven of the turf and ornamental pests Dursban controls. If we had more space, we could show you another seven. Like sod webworms, brown dog ticks, earwigs and Hyperodes weevils in turf. Or ornamental plant pests like mites, spittlebugs, exposed thrips, white flies and many more. But our point is, DURSBAN* insecticide is the choice of professional lawn spraymen when they need to get the job done. DURSBAN insecticide is effective on a wide variety of insects—including resistant strains. And it’s effective in a wide variety of applications. It’s economical because a little goes a long way. It’s non-phytotoxic, and it is biodegradable. So, if you haven’t tried it yet, it’s about time you did. Just remember to read the directions for use and follow the precautions for safe handling on the product label.

*Trademark of The Dow Chemical Company

DOW CHEMICAL U.S.A.
GOLF CARS: THE "HOW" OF FLEET ACQUISITION

The acquisition of a golf car fleet is a major financial step for any club. Properly selected, financed and operated, it can generate cash for your club and convenience for your members.

by WESLEY O. Mcgee

President Fargo, Inc.
Charlotte, North Carolina

Golf car rentals are presently the fastest growing source of revenue for golf courses and country clubs. Rental income now generates a larger proportion of a club’s total revenue used to pay salaries, permit expenditures for other equipment and course improvements and eliminate or reduce member assessments. Consequently, decisions about buying a fleet are increasingly important in a club’s total financial operation.

Just putting a new fleet on the course will neither guarantee profit nor increase revenue. But choose the right product, finance under optimum conditions, maintain and service properly and profits will be forthcoming.

FOUR BASIC FACTORS
These three elements—product, financial method and service program—are the key decisions that determine the profitability of a new fleet.

Who makes the decision—that’s the key to the other three. It’s not only the choices that matter, it’s who makes them.

There are four basic factors that must be considered in the decision to acquire a fleet: 1) the decision team—who should be involved in fleet acquisition; 2) the product choice—which golf car is best suited to the course; 3) the financing method—whether to buy or lease, and 4) what sort of maintenance, dealer support and other related factors are involved.

Proper evaluation of these four factors will enable the club to select the fleet that combines optimum performance with maximum profit. Failure to weigh each step can prove disappointing—particularly on the bottom line.

THE DECISION TEAM
Before choices of product, financing and support can be made, several aspects of fleet operation must be explored. These are: member preference, engineering, cash flow, turf wear, personnel requirements and others.

One individual cannot evaluate the diversity of factors involved in fleet acquisition. A decision team can best analyze the problem—each member concentrating his efforts on the aspect he knows best.

Each of four key club officials—the professional, course superintendent, club manager and treasurer—can play an important role in the decision-making process.

The club manager or general manager is usually responsible for most of the club’s revenue-producing operations. He plays an integral part in the decision. He has an over-all view of the club’s needs, particularly its cash needs, and he is in a good position to assess the need to acquire a new fleet.

Two perspectives of the club professional made his advice important. The conversations he has with members in the pro shop give him a day-to-day critique on a fleet’s performance as well as the members’ preferences. In all likelihood, he participates to some degree in the revenue from golf car rentals, and any fleet decision directly affects his income. He should be keenly aware of the existing fleet’s condition and of the supply-demand situation.

The superintendent knows intimately the terrain, drainage, slopes and car paths of the course. His expertise can be of great assistance when choosing the type of vehicle that’s best suited to the peculiarities of the course. He may also be responsible for maintaining and servicing the fleet and should know best his crew’s capabilities.

The ultimate decision in all matters involving a substantial capital outlay rests with the club’s chief financial officer—treasurer or comptroller—or finance committee. He must determine if the acquisition of a new fleet is financially feasible, which financing methods best suit the club’s fiscal requirements, what overhead or hidden costs may occur and what accounting practices can benefit the club upon acquisition. The last word probably belongs to the financial officer. The decision to acquire a new fleet is an operational decision; but the decision how to acquire the fleet is purely financial.

USE MEMBER EXPERTISE
Many clubs have recently established special car committees to analyze fleet needs. This practice allows the club to incorporate expert advice from other sources, such as engineers, insurance men, attorneys and others, into the decision. But the club manager, professional, course superintendent and chief financial officer must form the core of the committee, and the financial officer must have the last word.
THE PRODUCT CHOICE
Ten years ago golf car sales in the United States totaled about 5,000 units valued at $5 million. Today, the industry produces nearly 50,000 golf cars annually with a total value of $60 million. By the end of 1973, nearly 300,000 golf cars will be operating on more than 8,000 regulation courses.

This increasing demand has fostered competition among manufacturers from which clubs and members have emerged as the chief beneficiaries. Now golf cars come in a variety of styles and sizes with new, improved engineering features and options continually being developed. Sixteen car producers presently offer more than 35 different types and models at listed prices ranging from a little more than $1,000 to nearly $2,000. Optional items can range from $5 to several hundred dollars. Most popular cars, however, are listed between $1,300 and $1,500.

This diversity allows a club to tailor the golf car to meet its particular needs—its terrain, geographic region, climate and membership. For instance, the ideal car for a sandy, flat, seaside layout in the Southeast may be unsuitable for a hilly, wet course in the Northwest. A hilly or mountainside course, obviously, demands a golf car with a durable power plant. The same type of course may require a wide wheelbase with a low center of gravity for additional stability.

The vehicle body, fiberglass or steel, may be an important consideration where salt air, blowing sand or excessive rainfall take their toll on car bodies and paint. Normally, heavy rainfall during the golfing season or poor fairway drainage may make the vehicle weight a factor; heavier cars will sink deeper into the turf, leaving ruts. Tiller bar and automatic steering, lease and coil-spring suspension, seat brakes and other items must be considered. Some are standard, others are optional, depending on the manufacturer.

DON'T FORGET THE MEMBERS
Member preferences, when possible, should be given considerable weight. After all, they rent the cars. If they don't like the fleet, the rental revenue may be affected adversely. The cars' styling and over-all attractiveness, accessories (canopies and windshields), ease of entrance and exit, seat cushion comfort, sweater baskets and other equipment, even color, may be overlooked by the club, but may influence members' attitudes toward the new fleet.

Have manufacturers or dealers demonstrate and explain their products, preferably on the course itself. A test ride will give first-hand knowledge of the car's riding comfort, starting ease, acceleration characteristics, power and over-all performance. Conduct tests under similar conditions on uniformly wet or dry fairways.

FLEET FINANCING
We said earlier that the decision how to acquire a new fleet is not an operational one, but a financial one. Happily for clubs, the same competition that has produced a diversity of product choices has also spawned a diversity of financing choices.

The least understood aspect of successful fleet operation is how to take advantage of financing methods specifically tailored to the golf business. Indeed, the number and variety of financing options available to clubs are now so numerous and so imaginatively designed, we like to call them creative financing tools. These tools must be understood if the fleet acquisition and operation are to yield maximum benefits to the user.

PURCHASE OR LEASE?
Two questions can be answered quickly: Can your club afford to purchase the fleet? Does the producer or dealer offer leasing? If the answers are yes and no respectively, the choice is simple. Buy the fleet. It's usually not so simple, however, and generally a club's desire to purchase will be dictated by its financial condition, tax status and attitude of its membership. If your club enjoys a healthy financial condition, purchase may offer opportunities to take advantage of depreciation allowances, which can shelter earnings from taxes.

If your club has a capable maintenance staff and proper facilities, the purchase decision may be more appropriate. (There appears to be some validity to the notion that club-owned cars receive better care by users and better maintenance by club personnel.

The purchase decision, however, should take into consideration the total financial picture—not merely the price of the cars—but also the down payment, depreciation, interest charges, residual value, warranty, maintenance and service costs and insurance costs.

Should sufficient capital not be available, borrowing costs become an added expense. Member assessments or increased membership may help raise funds immediately, but does the desire to own the fleet compensate for possible negative effects?

Perhaps, if the club is well-capitalized with a healthy cash position, it may be faced with demands for two major capital items simultaneously: a swimming pool and a new fleet or four new greens and a new fleet. In that case, leasing the fleet makes a lot of financial sense.

LEASING ADVANTAGES
Many clubs lack sufficient capital for an outright purchase. For a club in this condition, leasing also offers distinct financial advantages. It may eliminate direct borrowing, thus maintaining the club's current debt-equity ratio, commonly known as "off-balance sheet financing."

Leasing also can provide 100 per cent financing, as opposed to 70 to 90 per cent financing if the fleet were purchased. A leased fleet is easier to replace, modernize or trade in, sometimes eliminating altogether the need for staff maintenance and service personnel. Its "pay-as-you-go" nature may allow the club to obtain more than one capital improvement item at the same time. Leasing does not preclude outright purchase and it allows the club to have the cars at its disposal when the club can use them most profitably. Insurance costs, the concern of the club if it owns the fleet, are the responsibility of the dealer or manufacturer under most leasing arrangements.

These advantages were once typically offset by disadvantages, such as the leasing methods not being

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